

REMARKS

General:

Claims 19-37 are pending in the application. Claims 19-37 stand rejected.

37 C.F.R. § 113(b) requires that:

“In making [a] final rejection, the examiner shall repeat or state all grounds of rejection then considered applicable to the claims in the application, clearly stating the reasons in support thereof.”

The office action dated June 18, 2003 does not repeat or state any ground of rejection, and does not clearly state reasons in support of any ground of rejection. It therefore does not constitute a proper final rejection, and it is requested that the action be rescinded in its entirety.

35 U.S.C. § 103 rejections:

For the purposes of this response, it will be assumed that the examiner intended to repeat the grounds of rejection asserted in the previous office action, except insofar as they are contradicted by the examiner's present remarks.

The examiner contends that “in contrast to the Applicant's allegation [that the ferromagnetic core of Larson does not generate a magnetic field because it is not a permanent magnet], it has been known that a ferromagnet would be able to generate a magnetic field,” but does not explain the supposed relevance of that assertion. Applicant infers that the examiner is still attempting to argue that the Helmholtz coils 31 and the core 12 of Larson generate, or make it obvious to generate, two magnetic fields.

Ferromagnets that generate magnetic fields are of course known. They are permanent magnets. The ferromagnetic core 12 of Larson is not a permanent magnet. It does not generate a magnetic field. It would not be obvious to substitute a permanent magnet for the soft ferromagnetic core because, as pointed out at page 3, lines 4-7 of Applicant's previous response, Larson's core is designed to operate as a radiofrequency core, and a permanently magnetizable core would be totally unusable.

The examiner further asserts that “when the amplitudes of two magnetic fields are changed, the resultant magnetic field would be changed, not only in magnitude, but also in direction. That is incorrect. If the two amplitudes are changed proportionately to one

another, the direction of the resultant magnetic field would **not** change. For example, if the induced magnetization in Larson's core 12 is treated as a separate magnetic field, because it is directly induced by, and will remain in proportion with, the inducing field of the Helmholtz coils, the direction of the resultant field will not change.

The examiner further asserts that "as the directions of two magnetic fields are varied, the amplitudes of the two magnetic fields would also be varied." This is clearly incorrect as typed. It is assumed that the examiner intended to say "the amplitude of the resultant field." Even that is not correct, however. If the two directions are varied while remaining at a constant relative angle, the amplitude will not vary. It is also apparently wholly irrelevant, because claims 19 and 32 recite "varying the amplitude of at least one of said first and second magnetic fields ... in such a manner" as to produce the specified variation in the resultant field.

It is therefore believed that claims 19 and 32, and claims 20-31 and 33-37 which are dependent therefrom, are not obvious over the cited reference.

Conclusion:

In view of the foregoing, reconsideration of the examiner's rejections and allowance of claims 19-37 are earnestly solicited.

Respectfully submitted

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